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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/814,397	03/21/2001	Janani Janakiraman	AUS9-2001-0094-US1	3885

7590 02/05/2004
Barry S. Newberger
100 Congress Avenue, Suite 800
Austin, TX 78701

EXAMINER

PATEL, JAYANTI K

ART UNIT	PAPER NUMBER
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2625

DATE MAILED: 02/05/2004

3

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/814,397

Applicant(s)

JANAKIRAMAN ET AL.

Examiner

Jayanti K. Patel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 March 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 March 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings filed on March 21, 2001 are acceptable subject to correction of the informalities indicated on the attached "Notice of Draftperson's Patent Drawing Review," PTO-948. In order to avoid abandonment of this application, correction is required in reply to the Office action. The correction will not be held in abeyance.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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4. Claims 1, 3-8, 10-15, 17-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Komsthoeft et al. (US 6,664,962) in view of Ritchey et al. (US 5,495,576).

Regarding claim 15, Komsthoeft discloses a shadow mapping graphic system comprising:

a circuitry operable for scanning a depth map corresponding to an image, in response to user input (column 8, line 56 through column 9, line 5).

Komsthoeft discloses the process of outputting a limited graphics data (column 8, lines 25-45) without specific details regarding outputting a nonvisual cue corresponding to the depth map.

In the same field of endeavor, however, Ritchey discloses a virtual reality system comprising the circuitry for outputting a nonvisual cue corresponding to a depth value in the map for each pixel scanned (column 30, line 52 through column 31 line 66).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use outputting circuitry as taught by Ritchey in the system of Komsthoeft because Ritchey provides Komsthoeft with an interactive input device that would simplify the computing task.

As to claims 17-18, Komsthoeft discloses the depth image being received in response to a web page containing the image (figure 15) and required circuitry (figure 2, element 59).

As to claims 19 and 21, Komsthoeft discloses circuitry operable for performing depth analysis of a set of images associated with the image (figure 3, element 114) and

operable for assigning depth value corresponding to each pixel of the image (column 8, lines 24-54).

As to claim 20, Komsthoeft discloses set of images associated with the image being selected from the group consisting of a stereographic pair including image and a plurality of images operable for displaying motion (column 1, lines 22-55). Additionally, such systems for processing stereographic images displayed routinely with motion, as being evidenced by other prior art made of record in the instant application.

As to claims 1, 3-7, steps claimed as method is nothing more than restating the function of the specific components of the apparatus as claimed above and therefore, it would have been obvious, considering the aforementioned rejection for the apparatus claims 15, 17-21.

As to claims 8, 10-14, the steps claimed as computer program product is nothing more than restating the function of the specific components of the apparatus as claimed above and therefore, it would have been obvious, considering the aforementioned rejection for the apparatus claims 15, 17-21.

5. Claims 2, 9, 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Komsthoeft et al. (US 6,664,962) in view of Ritchey (US 5,495,576) as applied to claims 1, 3-8, 10-15, 17-21 above and further in view of Keyson (US 5,784,052).

As to claims 2, 9 and 16, while Komsthoeft and Ritchey are silent about the specific details regarding the output being selected from the group of auditory cues and tactile cues, Keyson discloses a 3D coordinates data processing system processing

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wherein the cue being selected from the group consisting of auditory cues or tactile cues (column 4, lines 45-59).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to select cue as taught by Keyson in the systems of Komsthoeft and Ritchey because Keyson provides Komsthoeft and Ritchey with a data processing system that would require minimum time to interpret feedback. In addition, users take advantage of a catching effect, whereby knowledge that the system will catch the cursor when catering the target area leads to the faster movement behavior.

Other prior art cited

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Jojjc et al. (US 6,674,877) discloses a system for visually tracking occluded objects in real time.

Baccei et al. (US 5,371,627) discloses a random dot stereogram system.

Redmond (US 5,255,211) discloses a system for generating and processing synthetic and absolute real time.

Volk et al. (US 5,687,331) discloses a system for displaying an animated focus item.

Sullivan et al. (US 6,466,185) discloses a multi-plannar volumetric display system using psychological vision cues.

Roberts et al. (US 5,237,647) discloses a computer aided drawing system.

Sokoler et al. (US 6,320,496) discloses a system providing tactile guidance using sensory supplementation system.

Seibel et al. (US 6,563,105) discloses an image acquisition with depth enhancement.

Lipton et al. (US 5,416,510) discloses a camera controller for stereoscopic system.

Lipton et al. (US 6,366,281) discloses a synthetic panoramagram system.

Scanlon (US 6,536,553) discloses a system for using acoustic sensor for sub-surface object detection.

Galiana et al. (US 5,984,475) discloses a stereoscopic controller system.

Macri et al. (US 6,164,973) discloses a system that provides users with user controllable image for use in interactive simulated physical movements.

Bergen et al. ("A Novel Approach to Depth Ordering in Monocular Image Sequences", University of Freiburg, Germany, IEEE June 2000, pages 536-541.

Contact information

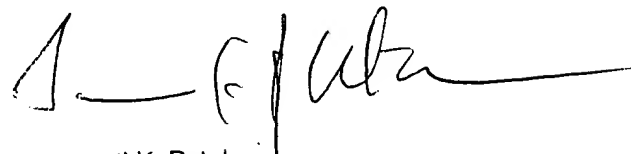
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jayanti K. Patel whose telephone number is (703) 308-7728. The examiner can normally be reached on Monday-Friday (7:00-4:00), alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta can be reached on (703) 308-5246. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JKP

February 2, 2004



Jayanti K. Patel
Primary Examiner